

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A radiation-emitting semiconductor component with a layer structure comprising:
 - an n-doped confinement layer doped with a first n-dopant,
 - a p-doped confinement layer, and
 - an active, photon-emitting layer disposed between said n-doped confinement layer and said p-doped confinement layer, and doped with a second n-dopant different from the first n-dopant, wherein
 - said n-doped confinement layer further includes the second n-dopant or an additional n-dopant, and
 - wherein at least one layer of the layer structure is formed of a material selected from the group consisting of AlInGaP, AlGaAs, InGaAlAs, and InGaAsP.

2-4. Canceled.

5. (Withdrawn) The radiation-emitting semiconductor component as recited in claim 1, wherein said semiconductor component is an LED.

6. (Withdrawn) The radiation-emitting semiconductor component as recited in claim 5, wherein said active layer of said LED comprises a homogeneous layer.

7. (Withdrawn) The radiation-emitting semiconductor component as recited in claim 5, wherein said active layer of said LED comprises a quantum well or a multiple quantum well.

8. (Original) The radiation-emitting semiconductor component as recited in claim 1,- wherein said semiconductor component is a laser diode in which a first waveguide layer is disposed between said active layer and said n-doped confinement layer and a second waveguide layer is disposed between said active layer and said p-doped confinement layer.

9. (Withdrawn) The radiation-emitting semiconductor component as recited in claim 8, wherein said first waveguide layer is an undoped layer.

10. (Original) The radiation-emitting semiconductor component as recited in claim 8, wherein said first waveguide layer is doped with said second n-dopant.

11. (Previously Presented) The radiation-emitting semiconductor component as recited in claim 8, wherein said second waveguide layer is an undoped layer.

12. (Previously Presented) The radiation-emitting semiconductor component as recited in claim 1, wherein said first n-dopant comprises silicon.

13. (Previously Presented) The radiation-emitting semiconductor component as recited in claim 1, wherein said second n-dopant comprises telluride.

14. (Previously Presented) The radiation-emitting semiconductor component as recited in claim 1, wherein said p-doped confinement layer comprises magnesium, carbon or zinc dopant.

15-16. Canceled.

17. (Previously Presented) The radiation-emitting semiconductor component as recited in claim 14, wherein the additional dopant is said second n-dopant.

18. Canceled.

19. (Withdrawn) A radiation-emitting semiconductor component with a layer structure comprising

- a n-doped confinement layer,
- a p-doped confinement layer, and
- an active, photon-emitting layer disposed between said n-doped confinement layer and said p-doped confinement layer, wherein
 - said n-doped confinement layer comprises a first n-dopant with a sharp doping profile,
 - said active layer comprises a second n-dopant, different from the first dopant,
 - said semiconductor component is a laser diode in which a first waveguide layer is disposed between said active layer and said n-doped confinement layer and a second waveguide layer is disposed between said active layer and said p-doped confinement layer, and
 - said first waveguide layer is doped with said second n-dopant.

20. (Currently Amended) A radiation-emitting semiconductor component with a layer structure comprising

- an n-doped confinement layer doped with a first n-dopant,
- a p-doped confinement layer, and
- an active, photon-emitting layer disposed between said n-doped confinement layer and said p-doped confinement layer, and doped with a second n-dopant different from the first n-dopant, wherein
 - at least one layer of the layer structure is formed of a material selected from the group consisting of AlInGaP, AlGaAs, InGaAlAs, and InGaAsP,

- said n-doped confinement layer further includes the second n-dopant or an additional n-dopant, and

- ~~said semiconductor component is a laser diode in which~~ a first waveguide layer doped with said second n-dopant is disposed between said active layer and said n-doped confinement layer, and a second waveguide layer is disposed between said active layer and said p-doped confinement layer.

21. (New) The radiation-emitting semiconductor component as recited in claim 20, wherein the first waveguide layer comprises a single layer that is doped with the second n-dopant and adjoins the active layer.